ED 471 037

DOCUMENT RESUME

UD 035 342

McClintock, Robert AUTHOR

Smart Cities: New York. Electronic Education for the New TITLE

Millennium.

Columbia Univ., New York, NY. Inst. for Learning INSTITUTION

Technologies.

SPONS AGENCY New York City Board of Education, Brooklyn, NY.

2000-00-00 PUB DATE

75p. NOTE

For full text: http://www.ilt.columbia.edu/publications/ AVAILABLE FROM

cities/cities.pdf.

Reports - Descriptive (141) PUB TYPE

EDRS Price MF01/PC04 Plus Postage. EDRS PRICE

DESCRIPTORS Academic Achievement; Communication Skills; \*Computer Uses in

Education; Cooperative Learning; Cultural Pluralism;

Diversity (Student); Educational Change; Elementary Secondary

Education; Faculty Development; \*Information Technology; \*Internet; Mentors; Portfolio Assessment; Problem Solving

**IDENTIFIERS** \*New York (New York); Student Engagement

### ABSTRACT

This pedagogical framework describes how the New York City Board of Education plans to improve education using information technologies. By providing advanced Internet services connecting students and their families, as well as teachers, schools staff, and the interested public, to a high-quality educational ISP/Portal, available to anyone at any place and any time, it can transform the conditions of educational work, in school and out. The Education Zone (edZone) will become the sum of the educational resources New York avails to its children, its educators, and citizens in general. This report presents an educational strategy for reaping the pedagogical benefits of this initiative, examining such topics as key elements in the technology initiative; raising educational achievement; the stakes of change; and three important changes (engagement, intelligence, and communication). It describes how the edZone will affect English language arts, social studies, mathematics, science, technology, the arts, languages other than English, career development and occupational studies, and health, physical education, and family and consumer sciences. Resources for each area are included. The report also discusses using the edZone in K-12, in college, and in school-towork transitioning. (SM)



Unicode MS" font, which is not included in older version of Microsoft Office. For accurate display and printing, this presentation requires the "Arial One can download the font (with patience or a fast connection) from

Please note:

http://officeupdate.microsoft.com/2000/downloadDetails/aruniupd.Jukm

Smart Cities: **New York**  Electronic Education for the New Millennium

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

W.T. For Learning Technologies, 10 THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) R. MCClintak

Institute for Learning Technologies Columbia University **Teachers College** 

EDUCATIONAL RESOURCES INFORMATION

This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality. Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

AVAILABLE

**Board of Education** 

**Feaching** 

and

**Faskforce** 

**New York City** 

Prepared for

Framework

the New Millennium

eEducation for

Smart Cities:

**New York** 

### **New York**

eEducation for

the New Millennium

### A large

On-line

educational community

substantial generate

revenue

to sustain

Services

members. 

ntroduction (2-6)

edZone Strategies (7-36)

edZone Practice (37-64)

Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments. (71-72)

Institute for Learning Technologies 2000

Smart Cities:

Teaching and Learning in Cyberspace An Initiative to Support

The New York City Board of Education is planning unprecedented initiatives using information technologies to improve education.

Through these initiatives, the Board seeks to make its huge scale, its proverbial weakness, the basis for its future strength.

services can generate substantial resources, both for and through the Through its Taskforce on Teaching and Learning in Cyberspace, and a related feasibility study by Andersen Consulting, the Board has established the probability that the astute provision of Internet educational use of digital technologies.

any place and any time, it can transform the conditions of educational By providing advanced Internet services connecting all students and public, to a high-quality educational ISP/Portal, present to anyone at their families, as well as teachers, school staff, and the interested work, in school and out.

An educational strategy for reaping the pedagogical benefits of this initiative follows.

### Smart Cities: **New York**

the New Millennium eEducation for

### Cumulative Revenue

# \$2,800 M --- \$4,700 M

# Key elements in the technology initiative

Starting with the 2001-2002 school year

administrators, will rapidly receive digital devices for use in All students, 4th grade and up, along with teachers and school and home. The Board will provide an ISP/Portal with an Education Zone for content, resources, and communication in support of educational work throughout New York City. These provisions will enable every child, every family, and every teacher to interact with resources in the Education Zone from any place at any time, in school and out. As a result, the Education Zone becomes the education program of the City, the sum of the educational resources New York avails to its children, to its educators, and to its citizens in general.

See www.nycenet.edu/cyberspace/ for the Andersen Consulting study.

edZone Strategies (7-36)

ction (2-6)

edZone Practice (37-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)



Introduction

Smart Cities: New York eEducation for the New Millennium

# Raising the spectrum of educational achievement.

## New conditions of teaching and learning make new patterns of accomplishment feasible.

- We know only past achievements, reached under past conditions.
- The Board's Technology Initiative would substantially change the conditions of teaching and learning.
- Therefore, let us think about achievements with a new vision of possibility.





edZone Strategies (7-36) Engagement (8-19) Intelligence (20-22) Communication (28-36)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

© Institute for Learning Technologies 2000

New York

eEducation for the New Millennium

# The City as Educator

The ubiquitous, continuous presence of a high-quality electronic Education Zone greatly supports natural educational conditions. Hitherto the school has contained the educational program.

The edZone,

2417,

- Henceforth the educational program will contain the school, as well as the home and the community the entire City.
- of civilization, the original interactive cultural ethos as the The Education Zone strengthens the City - civitas, source ubiquitous locus of educational work.
- facilitators working with a complete set of shared tools and All adults, groups, and organizations become educational resources.
- Schools and teachers become the pedagogical leaders, engaging the whole City in a continuous, comprehensive educational effort.

teachers.

students

work by

Within this comprehensive effort, much educational control and responsibility shifts to the student, a shift that the emerging pedagogy must recognize.

Introduction (2-6)

edZone Strategies (7-36) Engagement (8-19) Intelligence (20-27)

edZone Practice (37-64), Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74)
Pedagogical Requirements (65-70)
Civic Commitments (11-72)

2-70)

© Institute for Learning Technologies 2000

educational

conditions of

changes the

eEducation for the New Millennium

# The Stakes of Change

## New York City can fulfill its leadership in the historic democratization of education.

- In the late 19th century, New York City was a leader in making compulsory elementary schooling for all take hold as a civic responsibility and entitlement.
- In the early 20th century, the City again led efforts to extend compulsory schooling into adolescence and to provide opportunities for universal secondary education.
- Through the 20th century, the City has sought to enable a widening sector of the population, ever more diverse, to gain access to higher education.
- democratization of education by making an intellectually rigorous, Early in the 21st century, by creating the Education Zone and engaging all in its activities, the City can complete the the progressive education a reality for all.

atroduction (2-6)

edZone Strategies (7-36) Engagement (8-19) Intelligence (20-27)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70)

Conclusion (72-74)

1

Institute for Learning Technolo

Engagement Communication

> the New Millennium eEducation for **New York**

Smart Cities:

## each with great educational significance, Three changes,

Changing the conditions of learning and teaching changes what goals are practicable and what means are effective. It creates a new ecology of education.

teachers, administrators, and parents will have, at any time and any Through 24/7 interaction with the Education Zone, all students, place,

an unprecedented range of quality educational tools, resources, Unlimited, selective access, opening universal participation in and experiences.

teachers, administrators, parents, and the whole community. | Immediate, informative responsiveness by those resources, amplifying the working intelligence of students, and that of

Flexible opportunities for communication with others, facilitating the pursuit of curiosity and the construction of meaning.

Communication

Consider the educational possibilities these changes bring, especially in putting the student in control of his or her education.

edZone Strategies (7-36) Introduction (2-6)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Institute for Learning Technologies 2000

Engagement

**New York** 

the New Millennium eEducation for



Strategies -- Engagement

A Curriculum of Questions Explanatory modules Portfolio Assessment Multiple intelligences **Cultural Diversities** Learning by Inquiry

SS SS

unprecedented participation in access opens educational Unlimited, resources selective universal range of duality

resources of great extent and deep quality makes important reforms Providing access through the Education Zone to educational much more feasible.

- Respecting multiple learning styles.
- Cultural diversities become intellectual assets.
- Learning by inquiry.
- Using explanatory modules on demand.
- Assessment through portfolio construction.

Educators will need to put powerful questions to students, thereby activating and directing their curiosity, leading them to exploit their opportunities for access.

 The curriculum becomes a cosmos of questions to be asked, not a compendium of lessons to be learned.

Introduction (2-6)

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70)

### Multiple intelligences Strategies - Engagement

Learning by Inquiry A Curriculum of Questions **Cultural Diversities** Explanatory modules Portfolio Assessment

### Smart Cities:

**New York** 

the New Millennium eEducation for

# challenge multiple intelligences

Diverse resources in the edZone

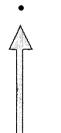
Linguistic Musical Logical-mathematical Visual-spatial

Bodily-kinesthetic Interpersonal Intrapersonal

confuse repetition with reinforcement, Traditional methods make it easy to inducing boredom, not a sense of accomplishment.



experiment with and control the Students have little power to earning styles they use.



subject in ways that activate different develop a lasting mastery of material. forms of intelligence helps students Reinforcement by experiencing a



distinctive learning style.

encompass multiple versions of the important topics, each adapted to a

Digital curricular resources can

earn and what styles of learning they students more control over how they Explorations in the edZone give



edZone Practice (37-64)

Building the edZone (65-74). Pedagogical Requirements (65-70) Civic Commitments (71-72)

Introduction (2-6)

edZone Strategies (7-36) Engagement (8.19) Intelligence (20-27) Communication (28-36)

earning Standards (40-58) Ising the edZone (59-64)

© Institute for Learning Technologies, 2000

Multiple intelligences Strategies -- Engagement

Learning by Inquiry Cultural Diversities

A Curriculum of Questions Explanatory modules Portfolio Assessment

### Smart Cities: **New York**

eEducation for

the New Millennium

# Multiple intelligences in practice.

Project Zero's School Using Multiple Intelligence Theory pzweb.harvard.edu/SUMIT/ The University of Rhode Island's Teachers in Technology Initiative www.ri.net/RITTI Fellows/Carlson-Pickering/WI Tech.htm www.chariho.k12.ri.us/curriculum/MISmart/mi\_smart.htm

The Gardner School, Vancouver, Washington www.gardnerschool.org/home.html

www.newcityschool.org/homepage.html The New City School, St. Louis, Missouri

www.washington.edu/computing/windows/issue20/johnson.html Case Study: Cultivating Multiple Learning Styles in Fish 101

Introduction (2-6)

10

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8-19)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Institute for Learning Technologies, 2000



Strategies -- Engagement

Multiple intelligences.

A Curriculum of Questions

Cultural Diversities Learning by Inquiry
Explanatory modules
Portfolio Assessment

The edZone presents full coverage of

diverse cultural resources.

presented with intellectual integrity The edZone will include multiple traditions and interpretations, and fullness.

- Curriculum design puts questions through which students generate unity in diversity.
- Groups contribute their fullest potentials and assert the value of those for the whole.
- educative force suited to a global age. diversities of a world city as an Educators mobilize the cultural

intellectual assets in a full curricul Cultural diversities become Print-based curricula have limited carrying capacity. the New Millennium eEducation for

narrow reduction of ideas uniformly curricula based on them present a Textbooks have limited scope and

- Curriculum design consists in deciding on what to limit and exclude.
- Groups compete for nominal inclusion, resulting in curricular superficiality.
- Educators fail to reflect the complexity of their world, propounding a false homogeneity instead.

Introduction (2-6)

Ξ

edZone Strategies (7-36) Engagement (8-19)

Communication (28-36) intelligence (20-27

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74). Pedagogical Requirements (65-70). Civic Commitments (71-72).

Conclusion (72-74)

© Institute for Learning Technologies, 2000



Smart Cities: **New York** 

Society & History

Smithsonian: U.S. Latino History and Culture

I parning by Induitry

Bachudolle, Barn Bran
 Varia Stantistanda, Lautu
 Bachuson, Anni Serakerikanda, Lautu
 Bachuson, And Serakerikanda, Lautu
 Bachuson, And Serakerikanda, Serakerikanda dan dan dan delakerikanda del

Resources and Selected Links

u Sentumas Court de Lone, interper u Sente de Fellika mel Schusi Mensa

Cally Law and Anne and Law Anteen Arten Arther of Ancoron An

Exhibitions

Aberra kinda ike daskan olimpa L.L. Kontu kibarua Sanda ikusa, kelandar mil meriar milan Aresa ast da kanbesara libud dan

dir Laure Romans Dan in Britania de desimana de Angelando de Manuer

d Collector's Other of Pearso, Roy Receive and America mining the United Science Manico deschedural (a

Multiple intelligences Cultural Diversities

Strategies - Engagement

World cultures on-line,

the New Millennium

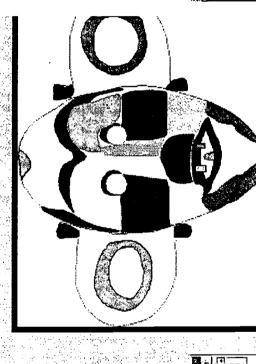
eEducation for **New York** 

3 nutine

brest. Collein luttemente atten Consessues

ያስተነት በያስ

Smart Cities:



ommunica

Ministère

"t and Life in Africa Pr

http://www.uiowa.edu/~africart

Before to account to be to the feet of the country Jeageh Gje Sttu STAIT INCHES COSAGES UP.

Burby 1 Auch

Asia Source

Shevinber Estate

Describe Check Disco-(4s) Rang (4s) Cebal vell(). (alses) Banclessas (nh.) Cebal (1d bing) And Ossiassis

Policy & Government Business & Economics

A Resource of the Asía Society Arts & Culture

Ania boules. In the control of Armi uthers, it full measures have been a desired to the control of the control

paterias to subsectional resources on the hubs the Aspides Project at the Tale Lan School

herica startes tentra at the bardennina a November 12, 2000

63. ond Lds. in Clife & Sullier

CIVIOR STATES

Leaning Stationary 190-59 Using the edZone (59-64)

Communication (28-36)

ERIC

ektrian Legter Esjöre aftön an hebrir, ord pidetal sod sovid derres de vija estays. Inndress innges, ord goren Mills was in Apparea A companies why to the PES on my to suregate manuscriptory o

Bestelen Heinere Bruksk isthoore, al (princer) defice rescues by experiguent about of lines

tent ib. i figue temassum Siftem ein fes Addungtjamest fangt

ekin en Suddes min i Entersi, skresteral, sru centrea erresere saxence tra direct Collègei

three frent litturbe Per

History: World

UT IN

## The edZone empowers

learning by inquiry.

the New Millennium eEducation for

Smart Cities: **New York**  Explanatory modules

Multiple intelligences Cultural Diversities.

Strategies - Engagement

A Curriculum of Questions

# Educators well recognize the value of learning by inquiry.

reformers, learning by inquiry often has not worked well because the resources sustain students' inquiries well enough Despite many attempts by educational in school libraries and staffs do not to produce substantial results.

good libraries and laboratories - needed inquiry because the intellectual tools to sustain effective inquiry are not particular, often avoid learning by Schools in low income areas, in

resources with which to sustain all forms The Internet is a vast research library and the edZone will make it usable. teacher, and every family will have Every school, every student, every comprehensive set of intellectual of inquiry

powerful questions and setting problems school have the essential role of posing productive inquiry. Teachers and the in ways that will motivate productive Resources, alone, will not lead to



Philosophy begins in wonder.

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8-19)

ntroduction (2-6)

13

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)



New York

Out of the same

eEducation for

## inquiry-based learning. **Diverse sites for**

Strategies -- Engagement

Multiple intelligences **Cultural Diversities** Learning by Inquiry A Curriculum of Questions Explanatory modules Portfolio Assessment



marinpulate the size of the circle and a rectangle to explore the probability that a dart thrown into the rectangle will land in the circle

, (.) (.)

Complex absolute value Marapulate value, 12, Use a ruler and the Pythagorean theorem to determine [z]

## Complex numbers in polar form.

Experiment with complex numbers in polar form by varying r and 6 or by dragging the points directly. View the corresponding cartesian coordinates.

Marquidate points. Compute the stope of the line between them, view the equations in Defining a line with two points

### Distance formula

Slope-intercept and point-slope form.

Manipulate points and measure the distaince between them using a ruler or with the

### distance formula.

Experiment with an ellipse in standar Pythagorean relationship, and visual Ellipse

### Exponential functions

Experiment with and visualize functi doubling/halving intervals

### Hyperbola

Experiment with a hyperbola in stand and foci, and visualize the string pro Manipulate points and it a line by ha

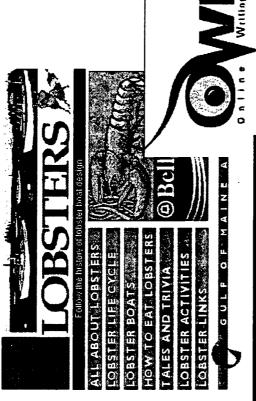
Least squares fit line

compute the least squares fit line for

### Linear inequalities

Manipulate and vicualize the solution 12

Linear Programming



Larnegie II Juseum of Malural History MORIH SOUTH EAS Institute for Learning Technologies 2000

Workshops and Presentations

Internet Resources

Purdue Whiting Lab & OWL

Fast-track Navigation

4

Main Inderes



Strategies - Engagement

es -- Engagement Multiple Intelligences Cultural Diversities Learning by Inquiry

Explanatory modules 1 Portfolio Assessment

A Curriculum of Questions

rather than sequential. \* Learning becomes cumulat

the New Millennium

eEducation for

Smart Cities: New York

the ideas and concepts that they should master in meeting high learning standards. Students can use explanatory modules on demand – short, lucid clarifications of

Existing curricula are too sequential.

Students who do not learn something and getting it right when they realize sequence have difficulty going back well at the required time in the they missed something. It is hard for teachers and students to jump ahead selectively when curiosity is ripe.

Unanticipated reviews of material from prior grades are almost mpossible.

materials at multiple levels of depth. In the edZone, mastery can be complete matrix of explanatory cumulative, for it can include a

and organize these for on-line use on ield. The Education Zone will collect graduate school is to have students develop short multimedia modules explaining basic elements of their A good pedagogy in college and demand A matrix of explanations becomes the essential resource for continuous, life-long learning.

Introduction (2-6)

15

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8.19)

edZone Practice (37-64) earning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74), Pedagogical Requirements (65-70) Civic Commitments, (71-72)

Conclusion (72-74)

© Institute for Learning Technologies 2000

4

**New York** 

the New Millennium eEducation for

### for on-demand use. Learning modules

Strategies - Engagement

Cultural Diversities Learning by Inquiry Explanatory modules Multiple intelligences

A Curriculum of Questions Portfolio Assessment



Internet Content for the Classroom Search MarcoPolo 🗥 marcopolo

www.worldcom. formants > முந்தேரை

com/marcopolo/

. ഡെഡ് പ

FOR FOR THE Euranda-Sustan Mchecker

http://www.nationalgeographic.com/xpeditions/ http://www.econedlink.org/



http://edsitement.neh.gov/



http://www.sciencenetlinks.com/index.html

for the Advancement of

The Kennedy Center

The Arts

American Association

http://artsedge.kennedy-center.org/







ARTSEDGE

Introduction (2-6)

16

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8-19)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

Institute for Learning Technologies 2000

National Geographic

Geography

Mational Council on Economic Education

Economics

National Endowment Council of the Great

Humanities

Society

for the Humanities/

City Schools

National Council of Mathematics

Mathematics

Science

Teachers of

Strategies -- Engagement

\* \* \* Multiple intelligences

### Smart Cities: **New York**

the New Millennium eEducation for

# Assessment through portfolio construction is feasible. A Curriculum of Questions

### Digital portfolios are easier **Emerging possibilities** to use and more flexible

### Physical objects complicate **Current difficulties** portfolio logistics

- · Student work is easy to save and safe to Student's work is hard to save and easily damaged
- · Comparisons, within and across Comparisons showing progress over
- Assessments easily become permanent components of a digital portfolio. portfolios, are easy to make.
- Teachers can embed links to further resources in comments.
- On-line portfolios are stable over time school to another and unwieldy for use in Portfolios are hard to transfer from one
- and can move from school to school and are more useful to colleges and employers.

Introduction (2-6)

edZone Strategies (7-36)

Communication (28-36)

17

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments. (71-72)

Institute for Learning Technologies 2000

the college entrance process.

Linking teacher assessment to examples

of work is cumbersome.

time are awkward to make.

Setting follow-up assignments incurs

logistical problems.

© Institute for Learning Technologies 2000

Smart Cities:

**New York** 

the New Millennium eEducation for

Electronic portfolios in action.

Portfolio Assessment 2 A Curriculum of Questions Cultural Diversities Explanatory modules earning by Inquiry

ies – Engagement Multiple intelligences

Dr. Helen Barrett maintains an excellent site, *Using Technology to Support* Alternative Assessment and Electronic Portfolios.

Hunterdon Central Regional High School, Flemington, New Jersey. Schools that are exemplary in using portfolios include Mt. Edgecumbe High School in Sitka, Alaska.

were that we had to pictorially outcome of the picture. There This was an expression piece that I did this year for G&T represent spring because it uplifting. for the most part seems so fresh, young, and I'm pretty happy with the objectives of the project represent a season using water colors. I chose to Art II. The project Spring APPINIOPE Priends Songs **300** 

change if I could do it over. are a few things that I'd

supposed to be a young girl with her whole life ahead of her not an old lady with a would add more flowers and I would make her hairline a little lower. She's receding hairline.

18

## A curriculum of questions,

the New Millennium

eEducation for

Smart Cities:

**New York** 

Learning by Inquiry Explanatory modules

Multiple intelligences

Strategies # Engagement

Cultural Diversities

not lessons.

Educators will need to put powerful questions to students, thereby activating and directing their curiosity, leading them to explot their opportunities for access.

 The curriculum becomes a cosmos of question to be asked, not a compendium of lessons to be learned.

edZone:

Students, by virtue of making continuous selections about how to direct their attention and activity, take fuller responsibility as the primary agent shaping their own education.

Teachers have essential roles as guides and goads – informing and sustaining their students' inquiries. They serve less as the font of knowledge and more as the source of questions. Parents are on the inside and can support their children's work, neither interfering nor ignoring. They can participate with their children and their educators in the pursuit of insight about difficult questions.

Schools have the opportunity to serve as community learning centers, shared resources and opportunities to participate in cultural life.

13

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Institute for Learning Technologies 2000

supports

Access

engagement

**New York** 

the New Millennium eEducation for



Strategies -- Intelligence

educational resources provides enhanced learning experiences. Embedding capacities for immediate, intelligent response in

Deepened understanding through quality simulations.

CHANGE

Sud Nud

- Improved basic skills through use of adaptive, integrated learning systems.
- Better habits through the automatic flagging of errors in spelling, grammar, usage, and calculations.
- searching, storing, analyzing, and synthesizing knowledge Superior output through regular use of on-line tools for -- a Cyber Pilot.
- Complex tracking of student progress and interests, with feedback to students, teachers, and parents.

Educators will need to adapt learning goals to a situation in which the everyday tools of education amplify the capacities of all persons to spell, write, remember, organize, calculate, select, analyze, and synthesize.

ntroduction (2-6)

edZone Strategies (7-36)

edZone Practice (37-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

© Institute for Learning Technologies, 2000

8

parents.

reachers, and

intelligence of

working

students

amplifies the

resources

response by educational

informative mmediate,

**New York** 

eEducation for

the New Millennium

Strategies - Intelligence

Simulations

See Basic skills

\* \* \* \* Better habits

On-line tools

interest and deepen understanding

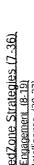
Complex simulations engage

## From learning about

- information about the subject at hand from the teacher to the student, with absorbing one-way communication Most learning in schools requires the communication consisting of
- skills, not as means to employ in the and objective of the education itself. course of education, but as the goal Students experience intellectual
- usually off topic, a distraction from the Communication between students is isolated task of learning about the matter the teacher expounds.

### To learning as

- mobilizing ideas and tools to carry out learning as knowledge professionals, productive tasks of intrinsic value. On-line simulations for individuals and groups engage students in
- to achieve the goals of the simulation. Learning is thus aligned with the uses important means to acquire in order Students experience skills as of real knowledge.
- Students and teachers communicate and experience their interactions as together about the tasks underway integral elements of professional



Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Introduction (2-6)

Communication (28-36)

earning Standards (40-58)

edZone Practice (37-64)

Institute for Learning Technologies 2000

7

Responsiveness

Adaptive, integrated learning

Adaptive, integrated learning

Better habits

On-line tools

the New Millennium eEducation for

Smart Cities: **New York**  systems improve basic skills.

The edZone can take drill and practice out of the classroom; make it diagnostic through continuous, built-in assessments running in the background; and provide it to all students whenever and wherever they may need it.

promote mastery of basic skills in mathematics and language arts can ensure that all children are ready to engage in meeting high Continuous access to adaptive learning systems designed to learning standards in a spirit of thoughtful self development. Children who most need a lot of feedback and practice often have the correct this inequity without depriving them of opportunities for more challenging problem-solving and collaborative learning experiences. least opportunity to get it. Good on-line skill-building programs can

Every child in the New York City schools should be at or above grade-level in basic skills from the 6<sup>th</sup> grade onwards.

Introduction (2-6)

22

edZone Strategies (7-36)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74), Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

Institute for Learning Technologies 2000

Strategies -- Intelligence Simulations

Automatic flagging of errors

Creates better habits.

Responsiveness

the New Millennium eEducation for

Smart Cities: **New York** 

grammar, and accuracy can provide students with routine immediate feedback that helps them build good skills.

Tool software that automatically flags suspected errors in spelling,

 When students do not realize they are making errors, they will keep on doing so.  Teachers and parents cannot promptly make routine corrections for all students all the time.  Programs that flag errors provide students essential feedback and enabling them to concentrate of complex problems and questions relieve teachers and parents from the burden of routine work,

 Tools that reduce the burden of complex calculation allow students to concentrate on mastering powerful concepts.

routine skill training and the development of higher-level problem-Tool software changes the relative pedagogical balance between solving capacities.

Introduction (2-6)

23

edZone Strategies (7-36) Communication (28-36) Engagement (8-19) ntelligence (20-27)

earning Standards (40:58)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)



Smart Cities: **New York** 

the New Millennium eEducation for

# Strategies - Intelligence Strategies - Intelligence Similations On-line tools – a Cyber Pilot – Better habits On-line tools 1. Strengthen knowledge creation. Strengthen knowledge creation.

flexible, comprehensive library. Development of its content and its tools The World Wide Web differs significantly from the mass media. The for use is in its infancy and will progress rapidly in the coming years. WWW is an interactive storage and retrieval system, similar to a

- strengthen their capacity to solve problems and present results. With tools for searching, storing, analyzing, and synthesizing knowledge based on resources in the edZone, students will
- With tools for working actively with on-line content, students will be able to express their ideas and accomplishments to others, evoking encouragement and criticism.
- With tools for creating a personal workspace, available whatever the time or place, students will integrate their learning across subjects and grades more effectively.
- intellectual collaboration will displace recitation as the basic form With tools for working together on substantive materials, of group instruction.

Introduction (2-6)

edZone Strategies (7-36) Engagement (8-19

edZone Practice (37-64) Learning Standards (40-58)

Building the edZone (65-74) Pedagogical Requirements (65-70)

24

Strategies -- Intelligence Simulations

Smart Cities:

eEducation for **New York** 

Better habits On-line tools 2 Responsiveness Student feedback Basic skills

Refresh

Sto

ğ

一块的表达 Address http://www.governtalk.com

## the New Millennium

# Useful on-line tools are now available.

## GuruNet\*

## **GuruNet One-Click for Windows**

Downloading GuruNet One-Click puts the true power of the Internet b screen.

### Take a Test Drive

Demo

### Get GuruNet Now

1. Click ligics to download GuruNet now (full instructio|CO|Umbia university analyzer

2. Click here if you prefer that we send you the GuruN

Feel free to review our <u>Priyacy Policy</u>

## Benefits of GuruNet One-Click

- Always there when you need it: any word, anywhere, anyt
  - No typing-- just point at any word and alt-click Instead of searching, GuruNet *brings* the answer to you Smart-- takes advantage of context words automatically
- Simple popup window-- does not interrupt your work Brief-- delivers what you need to know

Introduction (2-6)

25

edZone Strategies (7-36) Communication (28-36) Engagement (8-19)

engipart contains

demos downloads

a special edition of hysteer folio

**COLUMBIA CENTER FOR NEW MEDIA TEACHING AND LEARNING** 

Resources

Events Calendar

The portfolio of projects by CCRMIL

About

C N M T Buh. 04. 22, 2000

the redely belighered their stretch resonan derme north opge sent the builts anto exacted decreases to names confeto o

mmediately, Zapper will pop-up

with vouir referred text in the

promoters celebration, Apple 11

Lower and destandenced it, the

same time (Right Click) with

your mouse on your search the (Ctrl) key, and at the

to use IntelliZap, hold down

the atom author of the fell.

o entrate take soft! The feet bearing

Alows one to cepture, analyze, and ultimately express new knowledge using multimedia objects culled from anywhere on the web. It is a true departure from typical digital tools as it empowers the user to control his or her online experience through the use of a The Columbia University Analyzer (CU Analyzer) is a unique web-based tool that

CU Analyzer

personal digital partfolio. No longer is the online experience limited to sufing.
bookmarking or elaborate downloading schemes. With the CU Analyzer, users can quickly create their own web linked multimedie expressions using content from any website. The CCNMTL hopes this tool is the first in a senies of online tools developed by the Center that provide students and faculty with a seamless online learning environment.

exporting assets and worksheets in a variety of ways. It is intended to serve as the intermediate environment between Cohumbia University Analyzzer is a plug in for your browser that allows you to collect assets (text, finks, audio, video, and images) off any Website simply by dragging and dropping. You can then expand CU Analyzer to argumen those gethering dete and publishing your own creation. CCNMTL is developing CU Analyzer in conjunction with Learn assets on worksheets. CU Analyzer provides a set of tools and a large workspace for cataloging organizing and Cechnologies Interactive

edZone Practice (37-64) Learning Standards (40-58)

Using the edZone (59-64)

Civic Commitments (71-72)

Conclusion (72-74)

Institute for Learning Technologies 2000



# Intelligent tracking improves

一人人多女子 经有效的现在分词

On-line tools

Simulations

Basic skills

Better habits

Strategies - Intelligence

eEducation for

Smart Cities:

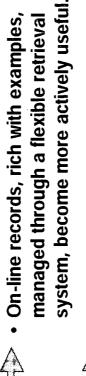
**New York** 

# educational decisions and choices. Responsiveness the New Millennium

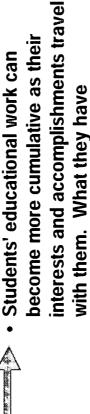
Current information about a student's progress, and its use, is limited.

Students, teachers, and parents can get timely, significant feedback on-line

> Physical records are hard to manage and information in them is difficult to



information about their work will move district, chances diminish that useful grade, school to school, district to As students move from grade to with them.



connected to examples. Educators Feedback can be more timely and can shape it to inform responsible choices by students and their

accomplished becomes more visible.



Through the edZone, the school, the home, and the community can coordinate their educational work. parents

26

edZone Strategies (7-36) Engagement (8-19)

Intelligence (20-27) Communication (28-36)

Building the edZone (65-74) Pedagogical Requirements (65-70)



**New York** 

the New Millennium eEducation for

## new learning goals. Adapting the curriculum to

Strategies – Intelligence
Simulations
Basic skills
Better habits
On-line tools

edZone: The

Responsiveness intelligence evokes

Technology enabled change in educational practice occurs when new means alter the fundamental repertoire of skills that the well educated person needs to master.

Hitherto the tools of education have been illuminating, but not actively responsive. Digital technologies permit the design of responsive educational resources.

ability to spell and to write with correct grammar and diction, to Technologies increasingly assist and amplify basic skills - the remember, to diagram, to map, to annotate, even to translate. calculate simple and complex functions, to categorize and

of intellect and intelligence increase and the fundamental question people at all places all of the time, opportunities for the cultivation What knowledge is of most worth? – will be hotly debated anew. In the edZone, where responsive tools become available to all

Introduction (2-6)

27

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Institute for Learning Technologies 2000

# 

Strategies - Communication Collaborative learning

Problem-solving Virtual Apprenticeship Mentoring

Smart Cities: **New York** 

the New Millennium eEducation for

the construction facilitating the opportunities curiosity and with others, pursuit of meaning Flexible

CHANGE

communication

allow students, teachers, and parents to engage more easily and widely in communicating about the significance and value of their educational work. People must make their knowledge meaningful in their lives, which they do by communicating with each other. Good digital technologies will

- Fuller use of opportunities for collaborative learning.
- Enhanced problem-solving as students can reach beyond the classroom and school for input and answers.
- Mentoring across age groups.
- Virtual apprenticeships become more fully feasible.
- Improved teaching through just-in-time professional development and consultation with experts on-demand.
- Linking the school, the home, and the community in a shared field of educational interaction through the edZone.

Educators will need to transform the school into a communications hub, not a closed circuit

ntroduction (2-6)

edZone Strategies (7-36) Engagement (8-19) Intelligence (20-22)

edZone Practice (37-64) earning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

nostitute for Learning Technologies 2000

28

New York

the New Millennium eEducation for

Strategies - Communication

Problem-solving The edZone creates opportunities

Just-in-time PD Educational linkages

Collaborative learning is fun and effective, for knowledge is a social enterprise. Working together as peers builds social bonds and a sense of value. for collaborative learning.

when students join to work on difficult problems, equipped with effective Collaborative learning works best tools and resources.

substantial communication with each Collaborative learning works best inquiries over time and engage in when students sustain shared

accomplishments in public and feel Collaborative learning works best criticism their work may receive. responsible for the credit and when students present their

can work together easily, in school or field in which collaborating students The edZone provides an interactive

comprehensive tools and resources, enabling them to pursue intrinsically The edZone provides students with difficult problems as far as their capacities will take them.

general public can view the results of students' work, providing comment which parents, teachers, and the The edZone is a public arena in and feedback.

Introduction (2-6)

edZone Strategies (7-36) Engagement (8-19)

Communication (28-36) Intelligence (20-27)

edZone Practice (37-64) earning Standards (40-58)

Building the edZone (65-74), Pedagogical Requirements (65-70) Civic Commitments (71-72)

© Institute for Learning Technologies 2000



Strategies - Communication

\*\*\* \* \* \* Collaborative learning

\* \* \* \* \* \* \* \* Just-in-time PD Educational linkages

Mentoring Virtual Apprenticeship Problem-solving

### Smart Cities: **New York**

the New Millennium eEducation for

## engage in problem-solving. Students can effectively

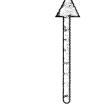
## Learning by problem-solving has limitations in traditional schools.

students to learn well through inquiry. The edZone creates conditions for





superficialities, not deep understanding. Effective inquiry requires full resources Few schools can provide their students with sufficient tools – as a result inquiry and tools pertinent to the question. often produces frustrated



conditions for effective inquiries are in irom any place at any time. Thus the

With the edZone, all resources and

tools are available to all students,

generate and test significant ideas. problems, challenging students to knowledge encourage posing real

place and students can carry them to

a point of significant understanding.

Open-ended inquiry leads, not to Students drop problems without seeing Frustrated inquiry is rarely cumulative.



those further questions are important. conclusive answers, but to further questions and to insight into why

Introduction (2-6)

8

edZone Strategies (7-36) Engagement (8-19) Intelligence (20-27) Communication (28-36)

edZone Practice (37-64) earning Standards (40-58) Jsing the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Institute for Learning Technologies 2000



how they lead to further, more

challenging questions.

Strategies - Communication

🌞 🚣 🐇 🐡 🌞 Virtual Apprenticeship

### the New Millennium eEducation for Smart Cities: **New York**

# inquiry learning. Examples of resources for Mentoring Mentoring

### Secondary

www.letus.org/bauile/

Excellent in every way: graphics, text, clarity,

www.exploratorium.edu/cycling/

questions.

dorishill.tripod.com/id16.htm Physics - elementary.

www.pbs.org/wqbh/nova/pyramid/

**Elementary** 

asterix.ednet.lsu.edu/~edtech/webquest/titanic.html Secondary biology inquiry.

Fitanic. What can numbers tell us about her fatal

voyage? Math

www.manteno.k12.il.us/drussert/WebQuests/HallOvan

doRobinson/start.html

What can 1 person do about hunger? Plenty. Start

here. Social issues.

www.geom.umn.edu/apps/gallery.html

Gallery of interactive geometry

www.exploremath.com/activities/Activity\_page.cfm?Ac

fivityID=13

www.miamisci.org/af/sln/phantom/mightymolecules.ht

An excellent array of inquiry topics visible by

scrolling.

Elementary science. Attractive page.

www.fi.edu/city/water/

Bats

www.fi.edu/qa98/atticindex.html

Elementary chemistry. Atoms via "Adams family."

chickscope.beckman.uiuc.edu/

Elementary. Science.

Quadratic equations

www.mgw.dinet.de/physik/ChaosSpiel/ChaosEnglish.

Chaos theory

www.vkp.org/

Secondary. Interdisciplinary. Resources to connect art and other disciplines.

ntroduction (2-6)

31

edZone Practice (37-64) edZone Strategies (7-36) Intelligence (20-27) Communication (28-36)

earning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

9 Institute for Learning Technologies 2000



Homepage of inquiry site. Math & science through

www.bsu.edu/teachers/burris/iwonder/

\*\* Strategies - Communication

Educational Inkages Virtual Apprenticeship

Collaborative learning
Problem-solving

## becomes effective in the edZone. Mentoring across age groups

the New Millennium eEducation for

Smart Cities: **New York**  Grouping students by age dominates schools. Insofar as students need development, age-grouping is a useful expedient. It leaves out a great to learn the same thing at the same time and they do so best when grouped together roughly according to their abilities and stages of deal, however.

- Younger children learn and form aspirations in interaction with older children.
- Less developed students can test and challenge themselves through interaction with more developed peers.
- are resources for others and role models heightens their sense of mentors with younger students. Becoming more aware that they Older students can learn a lot by having to act as teachers and responsibility and self worth.

The edZone provides means for students to interact flexibly, in school and out, across formal age groupings. Educational service within the edZone should become an expectation and norm for all.

Introduction (2-6)

32

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8-19

Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74)

Institute for Learning Technologies 2000



Strategies -- Communication Collaborative learning Virtual Apprenticeship Just-in-time PD

**Educational linkages** Problem-solving

# Mentoring through the edZone.

2 🜓 Bookmarks . 🎉 Locators //www.mentoring.org/framesets/fimsel\_resources.html 👻 📵 What's fleaked Back Franklin Rebaid Home Search Netscape Frank Security Shop The East Very Co Communicates New

## effective Practices

Mentoring: Elements of Effective Practice

3e a Better Mentor

A product of the National Mentoring Working Group convened by United Way of America and The National Mentoring Partnership

ake Action esonices

arthors oin NMP

significant experience in running mentoring programs. These leaders met regularly to discuss issues and precities which are emerging in their mentoring programs. Focusing especially on how to promote the growth of proporishle mentoring programs. They defined responsible mentoring programs. They defined responsible mentoring programs as those which mest the needs of both the mentorine programs as those which mest the needs of both the mentoried participants oup of both national and community-based norprofit organizations with in 1989. The National Mentoring Partnership (formerly The One to One Partnership, Inc.) and United Way of America convened a representative and the volunteer mentors.

> **Tentor Store** ntact Us

responsible mentoring programs. With this in mind, a volunteer subgroup... the National Mentoring Working Group... was formed in May 1990. It refined the full group's discussion of responsible mentoring into the elements of One of the most pressing needs identified by this group was for a set of guidelines, or common principles, to help guide the development of

These elements of effective practice present program elements and policies that have proven effective in a wide range of existing mentoring settings. This brochuse is available to any individual or organization wenting to develop, operate, volunteer in, or fund a mentoring program.

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

edZone Practice (37-64)

edZone Strateoies (7-36)

Communication (28-36) Engagement (8-19) ritelliuciice (20-27)

Goals (37-39)

Learning Standards (40-58) Using the edZone (59-64)

Conclusion (72-74)

49 Institute for Learning Technologies 2000

Smart Cities:

**New York** 

the New Millennium eEducation for

mentoring medium. They greatly reduce Digital technologies serve as both a coordinating mechanism and as a the logistical impediments. About Us - Curver Related Helping each other through career, life and personal challenges A global mentoring community for teens and adults Ž, reach411.com Get assistance will: dealing with obstacles and challenges making career and financial decisions finding answers to your questions exploring entrepreneurship getting a good education 12 Bookmaks / Location http://www.reach48.com/ A Modif Lists A Corporate Erlourts digita mantar. d Bo a mentur A Contact Us

33

Introduction (2.6)

AVAILABLE

Strategies -- Communication Collaborative learning · · · Virtual Apprenticeship virtual apprenticeships feasible. The edZone makes

Just-in-time PD

Educational linkages

Problem-solving Mentoring

Smart Cities: **New York** 

the New Millennium eEducation for

The edZone allows students to study disciplines and professions as if they are practitioners of them.

professionals at work with their data, tools, and instruments available to The Internet allows the direct observation of scholars, researchers, and the observer. Collaborative groups can interact as participants at an distance, learning by virtual doing in real time in real settings. In schools it is important to deploy communications technologies so that they empower collaborative groups. Groups can convene on-line, or thoughtful collaboration and the facilitation of meaningful interaction. ace-to-face, with information technologies providing substance for

Outside of school the edZone provides means for students to enter into virtual apprenticeships across a very wide range of interests. As peers engage in the shared evaluation of projects and in criticizing the quality and value of their results constructively they will make virtual apprenticeships highly effective educational experiences.

edZone Strategies (7-36)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Institute for Learning Technologies 2000

Introduction (2-6)

34

**New York** 

the New Millennium eEducation for

The best teachers hone relatively static

skills, acquired early in their careers.

## professional development. Just-in-time

Virtual Apprenticeship
Virtual Apprenticeship
Ust-in-lime PD
Educational linkages

Strategies -- Communication Collaborative learning Problem-solving

Teachers will expand the knowledge they use and diversify their skills.

> Texts and tests have largely determined the scope and sequence of ideas that teachers engage with their students. The need to acquire new knowledge on the job is low.

Students will interact with the full culture and into matters about which they have little prior teachers will facilitate and assess inquiries knowledge. The drive to learn new things becomes continuous.

> Pre-service professional development has provided decontextualized career resources that a teacher turns into his or her characteristic cast of practice in the first few years on the job.

Professional resources become mobile and environment that becomes less predictably can be brought to bear on-demand, at the structured. Teachers can put on-demand becomes increasingly an initiation in the point of need. Pre-service preparation Practice becomes a more many-sided scope and use of these on demand process of problem-solving in an help immediately to use. resources.

In-service professional development is style. episodic and difficult to put into practice in a constrained working environment that reinforces each teacher's initially acquired

edZone Practice (37-64) earning Standards (40-58)

edZone Strategies (7-36)

Introduction (2-6)

Engagement (8-19) ntelligence (20-27)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

© Institute for Learning Technologies 2000

35



36

Smart Cities:

**New York** 

the New Millennium eEducation for

## Collaborative learning Problem-solving Strategies - Communication Educating the whole person

Just-in-time PD Educational linkages firtual Apprenticeship

Mentoring

The edZone links the school, the home, and the community in a shared field of educational interaction.

by the entire city.

hard for teaches, parents, and the public systems. So too the family. The result fragments educational work, making it Traditionally schools and classrooms have been closed communications to join together in a shared effort. Students experience this fragmentation as series of things that different groups and alienating, with education becoming a institutions seek to do to them.

educational effort that each can sustain. Communication between school and significant overhead draining the home is awkward and creates a

pation by each in a shared, common field An alternative to increased communication between closed systems is particiof educational interaction, the edZone. Coordination is spontaneous when all have the same resources and tools. Students can better take responsibility for access to the same field of interaction. choices when they know that all have their education, able to explain their

Working with shared tools and resources, the school, home, and community can collaboration, not a mutual distraction. communicate through a fluid

Introduction (2:6)

36

edZone Strategies (7-36) Engagement (8-19)

Intelligence (20-27) Communication (28-36)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Goals (37-39)

Building the edZone (65-74), Pedagogical Requirements (65-70) Civic Commitments (71-72)

edZone Practice - Goals

Towards educational justice

in a cultural democracy.

the New Millennium eEducation for

Smart Cities: **New York**  The edZone provides all students with educational resources of great power and depth. 4th Grade New York City school population scores roughly the same as the

rest of the State. (2002-2003 and on)

All New York City 8<sup>th</sup> grade students pass the intermediate-level 8th Grade

assessments in English, mathematics, science, and social studies. (2006-2007)and on) 12th Grade All New York City seniors graduate with Regents diplomas.

(2010-2011 and on)

all students should graduate successfully. Equipped to succeed,

Introduction (2-6)

37

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8-19)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)



Smart Cities: New York eEducation for the New Millennium

Educational Justice
Cumulative Education
Purposive, Study

edZone Practice -- Goals

# Cumulative educational experience.

Traditional schooling has been sequential, a progression from grade to grade. an expansive mastery of resources in the culture. In the edZone, education becomes cumulative,

The physical condition of books forces educational experience to be sequential. The mechanics and scale of books further accentuates the division of knowledge into discrete subjects.

Students must leave curricular materials for each year behind as they move to the next grade. Students do not have the knowledge resources at hand to easily review, compare, or anticipate work slotted for some other time.

The curriculum becomes a set of discrete subjects, experienced in a strict order, the curricular scope and sequence.

All the resources of the edZone are available to any student from any place at any time. As a result, students can more easily build on the interconnectedness of experience and leaning, over time and across subjects.

Students easily draw on knowledge and ideas they experienced in prior grades in working on current problems. They can reach ahead when sudden insight shows where a questions might lead.

The edZone displaces curricular scope and sequence with a more powerful resource -- a cumulative curriculum.

Introduction (2-6)

edZone Strategies (7-36) Engagement (8-19) Intelligence (20-27)

Communication (28-36)

38

edZone Practice (37-64 Goals (37-39) Learning Standards (40-58)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)



#### Smart Cities: **New York**

the New Millennium eEducation for

## With the new educational strategies, Purposive Study students work purposively.

Students will experience intellect as resources for thinking productively.

and techniques in their fullness, not through The edZone will represent intellectual skills useful resources in pursuing questions of epitomes, and avail them to students as substantial import.

- Students will experience basic skills as acquisitions that speed and facilitate work on challenging matters.
- disciplines as organized means for the advancement of knowledge about Students will employ different interesting matters.

assuage shared concerns and curiosities. Education becomes purposeful effort to

Too often students experienced intellectual means as ends.

intellectual skills and techniques, which **Fraditional education tends to convert** learning objectives of inherent value. experience, into educational ends, people employ in the course of

- · Basic skills -- correct spelling, accurate places, etc. -- become signs of worthy calculation, knowledge of dates, achievement.
- Subjects, represented by epitomes of disciplines, as systematic ways to generate and validate knowledge. acquired knowledge, displace

This process reduces education to dead routine. edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

edZone Strategies (7-36)

ntroduction (2-6)

Intelligence (20-27) Communication (28-36) Engagement (8-19)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments, (71-72)

## edZone Practice - Learning Standards

English Language Social Studies

Mathematics—Science—Technology

Learning Standards. Continuity with

> the New Millennium eEducation for

Smart Cities: **New York** 

The Arts

Learning standards indicate the intellectual agenda that students should engage and master.

become a public reality, manifest in the cultural experience of all people at The standards and the resources requisite for meeting them should all times and all places.

The standards are not merely delegated to the school, closed within it and intelligence, judgment, and discourse expected in politics, business, the irrelevant to the rest of life. The conduct of life – the level of disciplined media, and personal conduct – should routinely excel the standards at their best.

should be able to use with competence in addressing questions and The standards indicate the intellectual tools and resources students problems of importance. All students, teachers, and parents should continuously command usable, standards. Student tracking and feedback should map achievements comprehensive resources supporting attainments that excel the relative to the skills and capacities that the standards define.

edZone Strategies (7-36) Communication (28-36)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments. (71-72)

Conclusion (72-74)

D Institute for Learning Technologies, 2000

Ising the edZone (59-64)

The edZone and

English Language Arts.

the New Millennium

eEducation for

**Smart Cities:** New York

edZone Practice - Learning Standards Mathematics—Science—Technology

The Arts

Physical Education & Career Development

A 10%

improvement, compounded

from 4th

through 12th, grade

more than

doubles

achievement.

Excellent resources supporting the English language arts learning standards exist. The edZone will make them available, fully and continuously, to all students, teachers, and parents.

the mechanics of reading, writing, speaking, and listening. Consequently, Tools in the edZone will expand the support students have in mastering interpersonal interactions in the language arts can emphasize the development of meaningful communication.

authenticity to the contexts for reading, writing, speaking, and listening in Using and making multimedia productions will bring greater diversity and

comprehensive setting, facilitating efforts by teachers and parents to work with students to develop skills in reading, writing, speaking, and listening The edZone brings all learning resources together in one, integrated across all content areas and standards.

study of reading, writing, speaking, and listening in school with activities in A comprehensive set of tools and resources, available at all times and all places, will help students draw productive connections between their he home, at work, and in the community.

edZone Strategies (7-36)

earning Standards (40-58)

Building the edZone (65-74) Pedagogical Requirements (65-70)

Institute for Learning Technologies 2000

41

edZone Practice - Learning Standards

English Language

The Arts Science—Technology

Other Languages Physical Education & Career Development

the New Millennium eEducation for

Smart Cities: **New York** 

## Hosted by Carnegie Mellon University

· Maxim: Access to all human knowledge - anytime,

Vision for the Universal Library

- anywhere.
- Access, query, and print any book, magazine, newspaper, video, data item, or reference document
  - regardless of language
- · using speech, touch screen, or gestures

\* Exolge

A Cerble arm of Merry Withers - Braned Books On Line - Frank Vermen Con Line in perparation

FEATURES

Centra oten, al Wanne Menne con al Pera - Cebrankez 1888 fort Octare Roko - Labat Baio

Searth and 12000 thetaer - New Loranz - Author - Tites - Scheck - Armè

NEWS

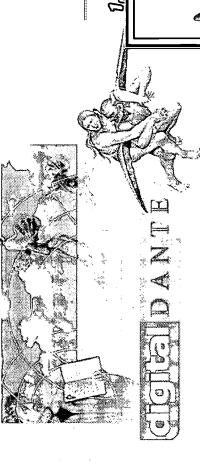
BOOKS ON LINE

The On-Aine Books Page EST 1991 - UPDATED NOVEMBER 28, MOD - FROM Mike Shamos on the Universal Library (Windows

Download this file directly (for modern users) Media, 512kbps stream)

- Challenges in data access:
- · High bandwidth networking for multimedia access
- Intellectual property protection while facilitating access
  - Intelligent information retrieval
- Delivery and protection of critical information

Seagate



University of Michigan Humanities Text Initiative American

Project

THE COMEDY LIBRARY ABOUT DANTE RESOURCES IMAGE COLLECTIONS

SEARCH

Smart Cities: **New York** 

the New Millennium eEducation for

## Social Studies. The edZone and

edZone Practice - Learning Standards
English Language
Social Studies
Mathematics—Science—Technology
The Arts
Physical Education & Career Development

and resources, and student-centered teaching, learning, and assessment. The edZone should key content to the State's eight critical dimensions of perspectives, patterns to organize data, multiple learning environments teaching and learning: intellectual skills, multidisciplinary approaches, depth and breadth, unity and diversity, multiculturalism and multiple

The edZone

will provide

Modules should clearly explain the key concepts of the program in history, geography, economics, and civics and these explanations should ink to a variety of cases and examples illustrating their pertinence to historical, geographical, economic, and political life.

The edZone should include a variety of simulations and collaborative learning opportunities pertinent to the full range of skills and ideas comprised in the social studies.

unparalleled

content in

fullness and

depthi

The edZone should provide parents and teachers with full resources for understanding the learning tasks that students face and the means to collaborate in helping individual students work successfully.

The edZone should enable students of the social studies to participate actively in the public life of the City.

Introduction (2-6)

43

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8-19)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70)

Conclusion (72-74)

Institute for Learning Technologies 2000



studies

social

#### Smart Cities:

**New York** 

the New Millennium ef, ducation for

HARIEM PENAMSSANCE 2001

English Language The Arts Mathematics—Science—Technology edZone Practice - Learning Standards Social Studies

Other Languages Physical Education & Career Development

## Resources for social studies.



Over 90 Collections Now Online

## **Collection Finder**

Select a collection or group of collections to search

**Today in History** November 29, 2000

#### Search

Search for items across all collections

## Learning Page

and the good of the book of the book such of bisherange The auth thouses no the propyring of the Himmether. For more information see Atrest

who utering make any apprehending the freshing Goot. Furthing for PDM is provided by a want f

he then Vedifierwork, districts to the ionesel

Statistical relief called the A

Frequently Asked

Questions

What's New!

Organized help for students, teachers, and life-long learners

Contact Infarostico: Tinavas Brar San, frejant

NETWORK NETWORK



sictuding derson pions, Web projects, and Distingraphical materiolis

How To View Copyright & Restrictions | Technical Information | Future Collections Section esternant. L.



activities, other recourse, and an appointer county by Mark Formats.

Chira Lemantes on Hist and the Group bepression.

National Archives and Records Administration



Com tital leages from the Pultonal Archaes, the FISC Library and other

For Redune fra Sear Mrs. Fenier Seastel Per Widge Marchald B. Brens P. COMPLET DEFECTOR

## Primary Sources and Activities

Records Management

Digital Hassengo

FshibitHall

About MARA

This page contains reproducible copies of primary documents from the holdings of the National Archives of the United States, reaching activities correlated to the <u>National History Standards</u> and <u>National Standards for Civics and Government</u> and cross-curricular connections.



Smart Cities:

**New York** 

the New Millennium eEducation for

Mathematics.

The edZone and

Social Studies

Mathematics—Science—Technology
The Arts
Other Languages edZone Practice - Learning Standards
English Language

\* Physical Education & Career Development

The edZone should provide programs to exercise student's basic skills in functions accurately and rapidly, and to stimulate students to engage in the construction and explanation of mathematical theory and proof calculation, to empower students to perform diverse mathematical

The edZone should help students, teachers, and parents deal with three standards – inquiry approaches; mathematics, science, and technology principles of best practice emphasized in the New York State learning integration; and equity.

mathematical, and logical relations, and to test, explain, and demonstrate generalities about them. The edZone should have associated resources To support inquiry approaches, the edZone should include powerful sets of mathematical tools designed to allow students to explore geometric, helping teachers and parents stimulate and guide student inquiry.

To support equity, the edZone should make available on-line tutorial help for students, teachers, and parents who find themselves stumped by a mathematical resource.

Introduction (2-6)

45

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8.19)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70)

Conclusion (72-74)



## \* \* \* \* \* \* \* \* edZone Practice - Learning Standards Enalish Janemade

Welcome to TCAEP.co.uk

· 多者源为文章等。

#### · \*\* Smart Cities:

**New York** 

the New Millennium eEducation for

Mathematics Re-



Each grade band contains these five sections

Ready-to-use, online, interactive, multimedia math lessons

Investigations

i-Math

### Gateway to Standards-Based Mathematics Education

website! This site is designed to "liuminate" the new NCTM Principles and Standards for School Mathematics. Welcome to the Illuminations

improve the teaching and find internet resources to earning of mathematics On this site you will

Lessons developed by expert teachers that you can use in your classroom The bast mathematics education web resources reviewed by our panel Reflection activities based on video vignettes of teaching and learning Selected Web Interoct-Based) Reflections on Teaching Lesson Plaus Resources

interactive version of the 'rinciples and

### Welcome to The Constants and Equations Pages, an award-winning project providing one of the internet's most comprehensive sources for information on constants and equations, as well as much, much more. There are currently over 4,500 pages of information on this site. P. Register with ENC

FMC Focus Magazine Contract ENC 

Eisenhower National Clearinghouse

· Topics - Explanations of the more common aspects of maths. Over 400 links · Constants - NEW - Over 600 alphabetically listed

· Numbers - wearten - Addition & Multiplication tables, log tables, metric prefixes and mor

Periodic Table - NEW - Complete periodic table

Equations - NEW - Some 450 entries

· Algebra - All the common algebraic identities, with info on each element

Conversions - Interactive conversion of over 500

including complex numbers

· Trigonometry - Identities

· Java Structurer - Weatto - Create your own interactive chemical compunds to find their

units

Search 0

Site Map

<u>Integration</u> - Integral functions Differentiation - Table of differential functions

Symbols - Greek alphabet, electronic symbols and

SI Units - Details on all the standard SI Units of

neasurement

mathematical symbols systematic names

Planets - NEW - Details on all the currently known planets and their satellites

· Constellations - Table of constellations

Suruse & Sunset Times - NEW - Times for 231 locations around the world

Moon Phases - Tables of moon phases for the next 20 years

#### What's New

Varnelle's Primary Math New FAQs: T2T Mathematics and Elections

#### Forum Features

Problems of the Week Web Units & Lesson Discussion Groups Forum Showcase Internet Newsletter Teacher2Teacher Search for Math or browse our Mathematics nternet Library

Education Math Math Resources by Subject

Key Issues in Math

Innovations and Concerns

K-12, College, & Advanced Math

Mathematics computer games

Colorful Mathematics is a series of educational software presenting advanced mathematical concepts to K-12 students in a game-oriented approach. The five games offered utilize simple coloring and/or drawing techniques to illustrate some state of the art mathematical concepts from graph theory and computer science.

COLORFUL MATHEMATICS



The edZone and Standards English Language Social Studies The edZone Practice - Learning Standards English Language Social Studies Social Studies Social Studies Social Studies The Practice - Technology

Science.

the New Millennium eEducation for

Smart Cities: **New York**  Physical Education & Career Development

clarifications, and interactive simulations clarifying key concepts across all The edZone will provide a wealth of explanatory modules, multimedia

inquiry. The Internet is a fundamental resource in the practice of science, scientist, along with the data and instrumentation at the base of scientific engineering, and technology. Students become able to observe science at work and the edZone should provide them with the means to ask how The edZone will greatly increase the accessibility of the practicing and why working science functions as it does.

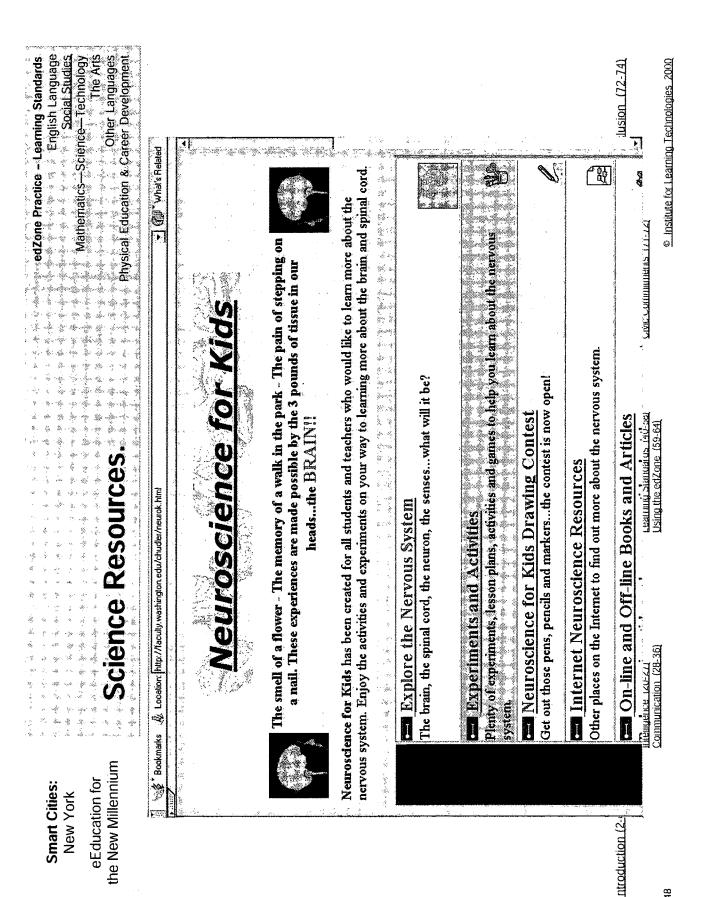
integration of mathematics, science, and technology by engaging in real-Powerful computer-assisted design tools can enable students to see the world engineering design projects. The edZone should enable students, teachers, and parents to connect the diversity of scientific resources on the Internet to the seven NY State MST in the edZone relate to the range of expectations established through the earning standards and to map how each student's scientific explorations standards.

47

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8-19)

Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70)





edZone Practice - Learning Standards

Physical Education & Career Development

The Arts English Language Mathematics—Science—<u>Technology</u>

The edZone and

Technology.

the New Millennium eEducation for

Smart Cities: **New York**  Other Languages

The edZone itself should encompass all the information technologies that students, teachers, and parents might need to encounter.

through its use, seeing it as a facilitating means with distinctive strengths authorities invest it with an aura of importance while the user feels let Students should develop an understanding of technology by learning teachers, and parents effectively. Poor implementation of technical and limitations. It is important to exercise care in the design of the resources mystifies technology, creating experiences of it in which edZone to ensure that its component technologies serve students,

Simulations in the edZone should provide a clear understanding of how and why fundamental technological innovations take hold in human experience and consequently transform and shape historical life.

complex reflection on basic choices, personal and collective, that people art, social studies, language and communication, careers, and on, in a In the edZone, technology should be a unifying study, linking science, need to make as they face the indeterminacies of their future.

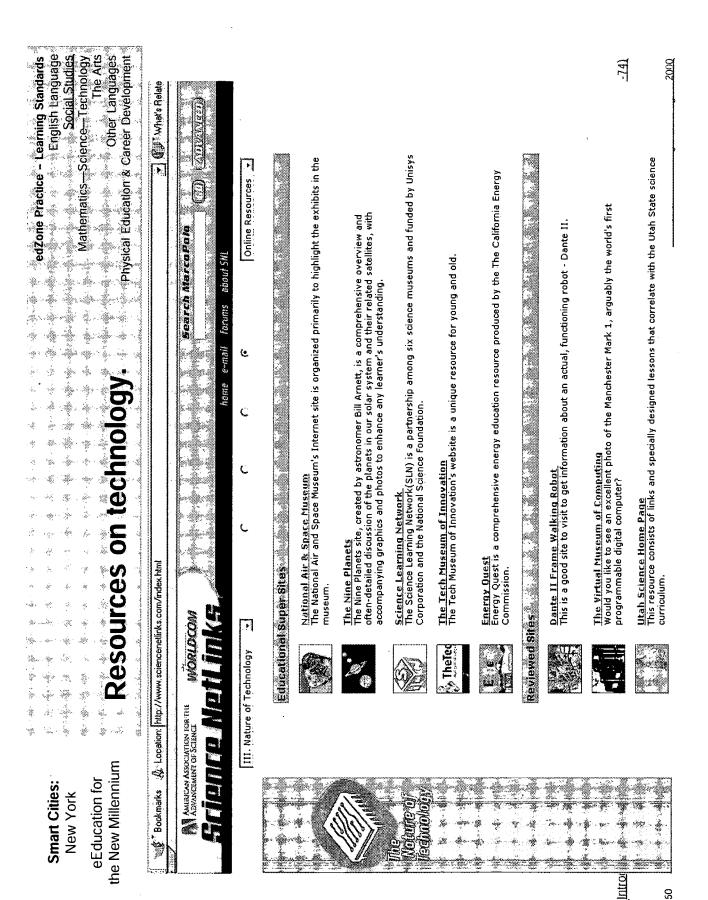
49

edZone Strategies (7-36) Communication (28-36)

edZone Practice (37-64) earning Standards (40-58) Jsing the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)







The edZone and

English Language

edZone Practice - Learning Standards

Social Studies

Other Languages

Mathematics—Science—Technology Physical Education & Career Development The state of the s the Arts.

> the New Millennium eEducation for

Smart Cities: **New York** 

culture. The edZone will help students, parents, and teachers integrate Jance, music, theater, and the visual arts pervade contemporary informal and formal arts education.

students, teachers, and parents to organize themselves spontaneously into active audiences will significantly improve educational experience appreciation. For both purposes, the power of the edZone to help The edZone, 24/7, should support both artistic creation and in the arts.

The means of artistic expression can be continuously at hand making a The edZone should provide on-line tools for graphic arts, music, video, theater and the like, as well as virtual display and performance space. fuller integration of the arts into educational experience more feasible.

narrow scope and sequence. The edZone can reflect the full flowering The arts are copious, protean, and diverse; they do not thrive in a of the arts; a greater diversity of talents can find opportunities for development and expression.

Introduction (2-6)

21

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8-19)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74)



families and young people. In support of that mission we straye to raise the level of theetee arts for young audiences by supplying educators and produces soulists Thourrs is dedicated to providing thatro of Funlish I annuana edZone Practice - Learning Standards ▼ ( What's Related eith aukeriar piev garipta, aur professional touring compenies and experienced educational support in the to advanced Publishing/Touting/Educational Support the highest secietic quality specifically for Realista Theatre Lesson Plans & Curriculum Ideas a Image Galleries & Exhibitions Reading Room & Publications classcode Table of Contents a ArtsEdNet Talk Search & Index Web Links Site Man | Heln Windsk of Art Seeing Stories at the Morton Sknon Museum ooking and Learning. Artworks The state of the s Theatre Enterprise and Video Production Project Space Art Through the Ages ioni Los Angeles Museums Jacob Lawrence: Storyteller A total insurersian project designed for serious stadents of theatre Location: http://www.sanford-artedventures.com/index.html Special Features Wighlights A Inchin Phy / Ama mains och announcementer s and resources BBA auf Bucherads African Dance Rhythmic Principles Cmart Piting Drumming Ando-Fwe Culture Foundation Bookmarks Course in Introduction to By CK Ledzełpo Sub-Saharan Dance-Drum Drumming Drunns and Table of Contents Culture Preface



edZone Practice - Learning Standards

English Language Social Studies

## The edZone and Fhe Arts The Arts The Arts Languages other than English. Physical Education & Career Development

the New Millennium eEducation for

Smart Cities: New York In the edZone the conditions for the study of languages other than English them, to connect with ideas and views uniquely expressed through them. cultural activities through other languages, to communicate by means of The edZone is a global network in which many languages are together change fundamentally. It greatly expands opportunities to engage in fully at work.

educational resources in each of the world's languages, along with the integration of language study into the curriculum more more feasible. Through the edZone, students can have access to a full range of news, entertainment, criticism, and culture, making the effective

collaborative projects and technical standards should ensure that work in The edZone should include tools that will facilitate multilingual any language will display correctly.

have a much more positive relationship to their first language within their With the edZone, students for whom English is a second language can educational experience.

Introduction (2-6)

53

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8-19)

edZone Practice (37-64) earning Standards (40-58) Using the edZone (59-64)

BEST COPY AVAILABLE

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments. (71-72)

Conclusion (72-74)



Smart Cities: **New York** 

English Language Social Studies

edZone Practice - Learning Standards

The Arts

Mathematics—Science—Technology

## Global languages.

guin Display Halp Uhrary Tools Publications Collaborations Support Persons Gregory Crane, Editor-in-Chief, Tufts University he Perseus Digital

evolving digital library, engineering nteractions through bring a wide range of source materials accessibility to the primary goal is to ime, space, and sources for the humanities will Perseus is an language. Our to as large an anticipate that possible. We study of the greater : 2 Persons Digital Library

A graph of the places and dates mentioned in this collection

Perseus introduces several new collections and a new look

Perseus is a non-profit enterprise, located in the Department of the Classics, Tufts

people through the

questions, lead to

strengthen the

quality of

new avenues of

research, and connect more connection of



WELCOME AKWABA BIENVENUE KARIBI dans l'univers des Belles-Lettres africaines

## Literatura latinoamericana

About Perseus

Location: http://www.geocities.com/macondomorel/index.html



Un espacio de cultura para la unión de los pueblos de latinoamérica

### LOS CONSAGRADOS



Bioy Casares Donoso Neruda Benedetti Cartázar García Márquez Sábato
Borges Arth Fuentes Cábrera Infante Guillén Quiroga Roa Bastos
Caroenber Asturias Rulfo Vareas Llosa Paz Mistral

Canenter Astunas Ru GOETHE O IP-ISTITUT

THE PARTY OF THE P Deutschland im internet De Legen Box ans Firth and Git Ellichet matterns in Daymoon and

itellette verkwell itt icabie in ben

Michael Wesely in acrounda Art Photography in Germany efter 1945

Gredic forms Munchen

Shane-Asseption

Wednesser has dead of the contraction of the c

Market

Dauteche Eustspiete in Indien

Pere les Wolf, Listines, Mich. Exachi, Educal Ethilitet

Dentectioned in Internet

Bhilliah & lehesteller Incres Librale Contr

Portect former Nubelingues Resemblicas busies



edZone Practice - Learning Standards

English Language Social Studies Mathematics—Science—Technology Physical Education & Career Development

Other Languages

### Family & Consumer Sciences. Health, Physical Education, The edZone and

the New Millennium eEducation for

Smart Cities: **New York** 

educational program ubiquitous and continuous, putting the school, along contained the educational program. As a result, as many matters related irony arose that these matters loose direct connection to the experiential with the home, family, and community, within it. This context will renew to home, family, and community became formal curricular subjects, the With traditional arrangements, the school more and more exclusively the linkages of health, physical education, family and consumer world of the student outside of school. The edZone makes the education, with the existential lives of students. These are among the matters that educators in school and throughout life consequences of their choices for their health, physical well-being, family should present in a preeminently student-centered way. The edZone should provide tools by which students can better control the ife, and consumer experience. More than most other aspects of education, these matters are sensitive to multi-ethnic, and multi-class in the principles of personal prudence that class differences. Resources in the edZone should be multi-cultural, they propound.

Introduction (2-6)

22

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) ingagement (8-19)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

#### English Language Social Studios The selection of the second edZone Practice - Learning Standards <u>Customize</u> Helping.org with your teverite sites - (E) WHITH HOLD Ogenena end Chansa Change 101 Save Latin America Dust Contout Grawing a DVS Cifeld See Diver Have Stotler \* ABENILUS \* PRESENTE \* CONTACTUS \* MELE Thursday Hoven ber 30, 20 news about us Jewel lends a hand to High Ground for Humanity in our phonty syction: End Hos! Model Leaders Tackly silved November 30, 2000 As a rate characted with training to car incines. Channel bere fegele Click Helle in State Land Cacal Subde of principles insunda Ceast are Heafth DESCRIPTION TO THE PROPERTY OF Helping People Pake a Difference TANCE WENE CATERIAY EGANCH NEWS COMMENCE COMMUNITIES Phos home charity search volunteer nonprofit resources ENDOPROFIL Resources and information your organization needs to make the nost of the Internet. Make sure online donors can find you. In Find a Charity & Make a Donation Progression MBe a Volunteer Nonprofits Register HERE | Hams | Chaifty Search | Volumest | Deparaft Ressuces | | Heres | About Le | Ensuranty Asked Questions | | Conservation Department & Commission | Find a charity to help in the QuideStar database of over 640,000 nonprofit organizations. braught to poutly Achies your Goldway to Modfillians le prevent ensit span de not ask for updates whee registering with Find a volunteer opportunity that's right for you. Enter your ZIP Code to search the volunteer databases Varant's I teath Irigization a site or for a preduct trial. Simply disit the site ugade in a menth 100% of your out over directly to the sharity. Renating Selica is sate, excure, and private Henth Sautre Her Health Orlus search Civic and Commonity Involvement Enter keywords to search the database: register your nangroffs with Helping. org. At mut Corn Animals and Environment Web Siles: Helpingorg Education and Research Resources on health & families. Search ) A Location http://www.hebing.org/ Arts and Culture Human Services \*(Continues - Alan Commonter / Women's Health Labolica Pilly / Awen. advantamaticantivenen asp International Reitolon Relavent Surer Bearliner. Deresten Bentanten 2 from Columbia University's Health Educa Hay Lake "About Alice! " Search Alice! Action Galeway to Heutlitain + Engloyment &Samer Content history Nedgalige + Cumminfilm ster · Wuenan's Hoath + Sperch Achon sexual healfh \* (IEUTOACIENCE ◆ Commorce Allergyers. • Asthma alconol, nicoline, %yolify ∞ Location: http://www.goaskalice.columbia.edu/index.html Harlem's Internet Youth Publication relationships (itness ( he New Millennium eEducation for Smart Cities: **New York** new Alicel questions Compositional 6



## BEST COPY AVAILABLE

Occupational Studies.

Physical Education & Career Development The edZone and
Career Development and

edZone Practice - Leanmy --English Language
Social Studies
Mathematics—Science—Technology
The Arts

In the edZone, the world of education and the world of work more effectively overlap.

they need to develop to gain entry-level employment in an occupation and developing the learning skills needed to sustain a successful career within another occupation. Students should understand what specific expertise how to go about acquiring it. Lastly, the edZone should facilitate their background knowledge requisite for effective participation in one or The edZone should enable students to perceive and master the a chosen occupation.

require that employees be life-long learners and the ability to adapt and continuously available to them, equipping them throughout life with the capacity for on-going self-development. Global, high-tech economies Students should experience the edZone as an educational resource change is the surest form of security.

will pervade work and that leisure will become more active and productive The edZone should reflect the recognition that a commitment to learning of diverse forms of value – economic, political, cultural, and spiritual.

Introduction (2-6)

27

edZone Strategies (7-36)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

Institute for Learning Technologies 2000

New York

the New Millennium eEducation for

58

### Careers.

English Language edZone Practice - Learning Standards

Social Studies The Arts Mathematics—Science—Technology

Bookmarks & Location http://www.umez.org/home.htm

the New Millennium

eEducation for

### . Zelak

Smart Cities:

**New York** 

## WILLIAM AND ASSOCIATION OF THE PARTY OF THE

## Upper Manhattan Empowerment Zone **Development Corporation**

Pool Exceptional Many Brown by 1970 - Man + 30 120 8000 - 1 m. 620 416.00 The following but the province of eventable through our trenther you are notice, prease contact the person listed at the end of the description feeticles interested in position president in the WBA newsteint or web page on office to account access our easy submession form, or call 631—444-6098 for more information. Association

· MOLL REAL STATE OF THE PARTY OF THE PARTY

Do. Homes Wides Archies e Education . Employment News . About IEC . Career Tools O Post a sign in the window

employment chankte

(b)

With LOOT - Got what you need Us rolodex with fingers crossed

The "First-Stop" ( arear Management) Veb Portal 

The Silican Alley Job Board

4 M 2 > 2

employ.com T.V 

employment CHANNEL

Video Archive

Education 6 Employment News 6 About TEC 🦚

(Pad Seine & securing a phosic obout and pur houghts of Whalipper or programming All

Search for

for a specific word or phread by using the torus

to the right

porting click on the title. You can also search

To view detailed infaminishin about a job

This Week's Workforce Minute

Tick Here for IO Test

... Limits

employ.com TV

Jaily SAT Question

employ.com TV airs every Friday at Bam and Tuesday mornings at 1am on Channel 13, WNET

Career Tools @

[Adminiment of Laterchies 3] [Unice 13 Development] [Devine] [Educator] [Internation | Research | Research | Educator | France

New Tide

series that focuses on profiling abor news, employment and training opportunities in the growth industries, hot jobs, This is a weekly half-hour tri-state region



employ tom TV Host Senal R. Petal

mentariote Anancariote Earl Heath unior net Westweld can Links Kyle Su guest as Hass M Robin F Craid 5 Carmey 10-Mer-00 11-17 AM • An Ingelet

Scalisticated Service l'Atheres with an Amatung Athlan Hari

Rath Developer

29-Nov-00 02 30 PM 29-Nuv-60 01 49 PM 29-140W-00 03-22 PEG

Bain Carken, Navagament Priveskouse Seeke Albance Guectan By Baseside Empirea Art Directors, A. Web Christians

B20 start 60

29-1100-00 11:05 AM

Are you underpaid 2 Click here to find out

lops in the Metro

2

COPY AVAILABLE

the next into from You can also see july in other cuttegales by cheltrag in the cutegary names below.

You can subant pale for parting or internal

Lycolly, Information, Systems Logarizational Calles in Systems (1919)

ing puriods of the second

edZone Practice -- Using the edZone

Grades K through 5 Grades 6 through 8 Grades 9 through 12

School to Work School to College

#### Smart Cities: **New York**

the New Millennium eEducation for

### Using the edZone All Grades.

## Intelligence

## Engagement

provides sustained simulations, engaging participants in using the techniques of the relevant disciplines and professions to create knowledge and know-Across the range of the how.

Guides for each subject and to

digital libraries of materials

correlated to its scope and

seduence.

Standards and the Resource

The edZone provides full

access to the Learning

provides tools to exercise and The edZone continuously develop basic skills.

sequence and provide feedback work relative to the scope and about its quality relative to the The edZone will map a user's learning standards. The edZone poses the powerful, |

## Communication

Learning Standards, the edZone | educational communications The edZone serves as an hub, enabling - Students to collaborate in and out of school on difficult problems.

which older students mentor younger students in their Patterns of interaction in studies.

groups, and interest driven contests, quests, affinity **Broad participation in** earning

Introduction (2-6)

29

edZone Strategies (7-36) Engagement (8-19)

Communication (28-36) Intelligence (20-27)

edZone Practice (37-64) earning Standards (40-58) Using the edZone (59-64) Goals (37-39)

JEST COPY AVAILABLE

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

Institute for Learning Technologies 2000



generative questions motivating the advancement of knowledge within the scope and sequence.

multimedia modules explaining

It comprises clear, concise

the concepts and principles

encompassed within the

standards.

edZone Practice - Using the edZone All Grades

School to College School to Work Grades 6 through 8 Grades 9 through 12

Grades K through 5

#### Smart Cities:

**New York** 

the New Millennium eEducation for

### Grades K through 5 Using the edZone

## Engagement

The edZone provides numerous | At this stage, mastery of basic challenges that engage children the relevance and reliability of retrieval as well as assessing in the practice of search and quests and exploratory results,

Students and teachers build the expectation that the school is collaborative development of answers that will stand up to edZone is a resource for the the place where interesting questions get put and the reflective examination.

#### Intelligence

those skills has significance for student feels the command of opportunities for practice and skills is the first priority. The self-correction so that each the fulfillment of his or her edZone should situate purposes.

problems, and create meaning. sense that through the edZone tools, with which they can build Students should develop the they control powerful cultural their intellectual skills, solve

## Communication

with the edZone as a medium of Students should acquire facility communication,

between their immediate group should progressively use the Through the 3<sup>rd</sup> grade, they edZone for communication and other groups and individuals.

interaction with others, near and teachers, and parents should cultural work and to facilitate personal email to engage in use collaborative tools and From 4th grade, students, far, in work and play. Students learn with simulations.

Introduction (2-6)

8

Engagement (8-19)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

edZone Practice - Using the edZone

Grades 6 through 8 Grades 9 through 12 Grades Kithrough 5

School to College School to Work

### Grades 6 through 8. Using the edZone

## 

#### feedback about the sequence of parents, and others, continuous edZone must provide students, what each has done relative to each student's decisions about student as he or she considers Such feedback should inform informative resources for the the full scope of knowledge. In the edZone, the scope is his or her studies and help sequence individual. The along with their teachers, teachers and parents be comprehensive and the Intelligence successive choices.

## Communication

the greatest responsiveness for fostered by the edZone should embody a utilitarian calculus – Communications patterns the greatest number.

experience using different forms asynchronous, proximate and distant, direct and mediated. of interaction for different educational purposes Students should gain synchronous and

Students engage the problem of kind of communications media. appearances fostered by each separating realities from

Introduction (2-6)

61

Portfolio construction.

and comprehensive.

edZone Strategies (7-36)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

Simulations across subjects.

Building the edZorie (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

Institute for Learning Technologies 2000



Students, teachers, and parents

knowledge and inquiry. rise to the structure of

should realize that they will not

"finish" a topic and then move

on to the next. Questions

explored lead to further

fundamental questions that give

Students should make their

**Engagement** 

the New Millennium eEducation for

Smart Cities: New York initial cycle through the

force in inquiry-based learning.

Novices must experience the edZone as both manageable

questions - that is the driving

edZone Practice - Using the edZone

All Grades

Grades K through 5 Grades 6 through 8 Grades 9 through 12 School to College School to Work

#### Smart Cities: **New York**

the New Millennium eEducation for

### Using the edZone Grades 9 through 12.

## Intelligence

Students actively use feedback resources in individuating their capacities in the edZone as interests, capacities, and accomplishments. basic questions, expanding the

engagement with the culture.

reach and depth of their

Students will show more

differentiation in the

Students again address the

Engagement

the virtual and the actual differ simulations and evaluate how Students use a wide range of in substance and action. Students develop discrimination of intelligent tools within the edZone

workplace, and public spheres.

higher education, the

engage with the world at large, Through the edZone, students

with the school as a staging ground and the portfolio the

## Communication

X V vi

Students increasingly engage in through the edZone on matters of personal and public import. communication in order to act

from the traditional idea that the the rest of practical life, become school is a realm separate from A range of norms, which derive subject to revaluation.

within the educative community. develop their public personae, responsible sense of who they in their selection and application |communications resources to are and what they stand for Students will use

Ø

#### Introduction (2-6)

62

assemblage of its fruits.

edZone Strategies (7-36)

Engagement (8-19) Intelligence (20-27) Communication (28-36)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

edZone Practice (37-64)

Jsing the edZone (59-64)

Conclusion (72-74)

Institute for Learning Technologies 2000

sophistication of their inquiries.

Students engage in complex collaborations, reaching into edZone Practice - Using the edZone

All Grades

Grades 6 through 8 Grades K through 5 Grades 9 through 12

School to Work

Smart Cities: **New York** 

the New Millennium eEducation for

Achieving

Seniors

### Using the edZone School to College.

These students should find entrance to colleges of their choice easy and the transition to undergraduate work natural, having already interacted

substantially with university resources and studies.

there. Progression into CUNY should be natural, facilitated by extending Most should get into four year colleges and be ready to succeed in study

**Achieving** 

Seniors

Average

the edZone to encompass undergraduate and graduate study.

seem much like an extension of high school with preparation for desirable Most should easily enter two-year colleges, which, within the City, will **Achieving** Low

jobs in the work place as a prime concern.

confident that they can extend their education through further study on-line. A growing proportion of graduates may directly enter professional life Seniors from Special

The lockstep from high school to college may weaken further. High schools Colleges will re-examine their admissions processes as more students will have been interacting with their programs routinely while in school. The Entrance College

NYCBoE and the City's higher education community will take the lead in his re-examination. Requirements

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8-19)

Introduction (2-6)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

© Institute for Learning Technologies, 2000

Seniors

edZone Practice - Using the edZone All Grades

All Grades Carough 5 Grades 6 through 8 Grades 6 through 8 Grades 9 through 12

Grades 9 through 12 School to College School to Work

## Using the edZone School to Work.

eEducation for the New Millennium

Smart Cities: New York Employers will interact regularly with students through the edZone, facilitating the transition from school to work. The Internet, and the edZone with it, builds fluid interconnections between diverse sectors of activity that were previously more distinct from each overlap. Students will act as participant observers in different kinds of work settings. Employers in both the public and the private sector will other. The world of work and the world of education will increasingly routinely participate in the educational experience of students.

condition of entry level employment. Employers need to take affirmative continuously extend its educational attainments beyond the standards. meaning by making high achievement with respect to the standards a Employers need to help imbue the learning standards with value and measures within the edZone to ensure that the entire workforce can

The edZone can attract employers in search of skilled, well-educated workers and dynamic employers have both a self-interest and a civic responsibility to make the edZone pedagogically effective.

Introduction (2-6)

edZone Strategies (7-36) Engagemen (8-19) Intelligence (20-27) Communication (28-36)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

Institute for Learning Technologies 2000

64



Student Requirements

eacher Requirements

Seneral Requirements Parent Requirements School Requirements

#### Smart Cities: New York

the New Millennium eEducation for

Educators

using

## Pedagogical requirements.

capacity and through-put, etc. - should suffice to support full use of the Education Zone by all members of the City's educational community. Technological specifications - processing power, bandwidth, server

its educational plan should be an absolute priority that all bidders must Providing the pedagogical requirements set by the Board to implement meet in implementing the Board's technology plan.

technology

to improve

education,

- Tools for students must provide them with full control over their educational activities.
- Tools for teachers must enable them to interact effectively with each of their students, and their parents, individually and in groups, about all aspects of a student's educational work.

technologists

- Tools for schools must enable the school to serve, 24/7, as a communications hub for everyone connected with it.
- Tools for parents must engage them in the educational life of their children and offer adult educational resources, making the school an effective center of community learning.

Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Introduction (2-6)

techmology.

65

to improve

education

Guism

Building the edZone - Pedagogical Requirements Student Requirements

Parent Requirements School Requirements

General Requirements eacher Requirements

#### Smart Cities: **New York**

the New Millennium eEducation for

Students

meed to

comirol

### Technology scaled to student potentialities.

The edZone must provide students with full control over their educational activities.

- effective procedures for the prompt, continuing review of contents in intellectual content. Development of the edZone should include Foremost, students need to control comprehensive, high-quality an effort to guarantee accuracy, currency, and completeness.
- Students need the most up-to-date tools for on-line collaboration and powerful applications for processing content.
- student's work and the ability to access it should endure across his Students need a secure, copious storage for their work, with the ability to access it routinely, at any time from any location. Each or her whole educational experience.
- apprenticeships, simulations, webquests, virtual worlds, and so on. Students need a full repertoire of stimulating, challenges - on-line
- experts, peers, and counselors about concerns of mutual interest. Students need opportunities to interact with a wide variety of

Introduction (2-6)

edZone Strategies (7-36)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74). Pedagogical Requirements (65-70). Civic Commitments. (71-72).

© Institute for Learning Technologies 2000

relevance.

**accuracy** 

confident that

high-quality

content,

is has been

peer reviewed

Student Requirements Building the edZone - Pedagogical Requirements

School Requirements Parent Requirements

**Teacher Requirements** 

Seneral Requirements

Smart Cities: **New York** 

the New Millennium eEducation for

the work of students. teachers facilitating

Technologies for

**Fools for teachers must enable them to interact effectively with each of** their students, and their parents, individually and in groups, about all aspects of a student's educational work.

- authorities in short teachers need a full suite of tools for on-line students and to perceive easily the results of students' work, to Foremost, teachers need means to put powerful questions to interject suggestions and criticisms, to consult with diverse collaboration with diverse individuals and groups.
- experiences and opportunities to engage specialists as the occasion contingency long ahead of time, but they must have the means at Teachers need a full set of just-in-time professional development hand to respond knowledgeably, however the occasion warrants. requires. In the edZone, teachers cannot be prepared for every
- they can refer parents who seek help in working constructively with parents. Teachers need a repertoire of useful resources to which their children. Teachers become educators in the fullest sense. The edZone will put teachers into a mentoring relationship with

Introduction (2-6)

edZone Strategies (7-36) Communication (28-36) Engagement (8-19) Intelligence (20-27)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

Institute for Learning Technologies 2000

67

Building the edZone - Pedagogical Requirements
Student Requirements

Technologies to make

the school a center for

General Requirements Parent Requirements

Feacher Requirements School Requirements

Smart Cities: New York

the New Millennium eEducation for

pedagogical communication.

As the school ceases to contain the educational program, it becomes pervades the whole life of the community. School technologies must the conductor orchestrating use of an educational program that enable it to serve, 24/7, as a communications hub for everyone engaged in educative work.

- encompassing the classroom, the school building, the district, and Foremost, the school becomes a communicative organization the whole educational system.
- · As a communicative organization, the school should be among the records, complex information, and substantive ideas in a secure, most capable and sophisticated, able to handle comprehensive responsive way.
- Sustaining progressive improvement in the quality of the edZone will students, teachers, and parents with useful feedback and effective entail continuously upgrading the capacity of the school to provide control over educational resources.

Introduction (2-6)

edZone Strategies (7-36) Intelligence (20-27) Communication (28-36) Engagement (8-19)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70)

89

Building the edZone - Pedagogical Requirements Student Requirements

School Requirements Feacher Requirements Parent Requirements

General Requirements

#### parents to engage fully Technologies to enable in education.

the New Millennium eEducation for

Smart Cities: **New York** 

children and offer adult educational resources, making the school an **Fools for parents must engage them in the educational life of their** effective center of community learning.

- active curiosity and the urge to make use of educational opportunities. Foremost, parents need to set examples as learners for their children. For that to occur, the edZone must provide adults with a full range of With the edZone, it is less important that parents help their children perform prescribed tasks and more important that they exemplify useful learning opportunities.
- In addition to engaging in their own educational opportunities, parents The edZone should track what has and has not been accomplished and provide both parent and student insight at each step into what can help their children in the edZone with the logistics of learning. might come next.
- Parents need to be able to communicate easily and regularly with all understand expectations and have access to all tools and resources those involved in educative work with their children. They need to with which their children work.

Introduction (2-6)

69

Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

Student Requirements Teacher Requirements Building the edZone - Pedagogical Requirements

School Requirements Parent Requirements

Seneral Requirements

### Pedagogical power the key to success.

the New Millennium eEducation for

Smart Cities: **New York**  It is worth investing in technologies sufficiently powerful to ensure that the edZone serves students, teachers, parents, and the whole City well.

- its educational services. Users will stick with the portal and return to it Education, relative to typical commercial portals, lies in the quality of regularly if they experience it as a compelling educational resource. The comparative advantage in a portal sponsored by the Board of
- participation is likely to be a function of the quality of the educational The Board can leverage its huge scale by setting its standards and aspirations higher than smaller competitors can. The scale of experience the edZone sustains.
- model should enable the creation of high quality content and powerful Open source development techniques and an open source business software tools at minimum costs.
- The edZone can set itself apart from alternatives through continuous, exacting peer-review of content and pedagogy.

Communication (28-36)

edZone Practice (37-64) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Institute for Learning Technologies 2000

2

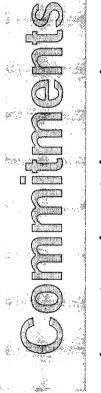
## Building the edZone - Civic Commitments

Higher Education and the Professions
Government – Business – Labor
Philanthropy, Religion, and Art
Journalism and the Media

Journalism and the Media Sports and Entertainment Communities and Leadership

New York eEducation for the New Millennium

Smart Cities:



In a system where students are players and teachers are coaches, the whole community must join in as supporters and fans.

- Higher Education Knowledge in the people's service.
- Professions Expertise in the service of children and youth.

Smart

The

- Government Making intelligent connections for all.
- Business Volunteering for educational excellence.
- Labor Solidarity supporting the dignity of creative work.
- Philanthropy Resources where they count.
- · Religion Cultivating value and dedication.
- Art Creativity making meaning through the City.
- Journalism Information serving the pursuit of possibility.
- New Media Design for living and learning.
- Sports and Entertainment Get smart. Get with the message.
- Communities Diversity makes the City work.
- Leadership Educational vision and the future of New York.

The edZone is a work of the City as a whole.

Introduction (2-6)

7

edZone Strategies (7-36) Engagement (8-19) Intelligence (20-27) Communication (28-36)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-7-

© Institute for Learning Technologies 2000

achievement

to which

contribute

Building the edZone - Civic Commitments
Higher Education - the Professions
Government - Business - Labor

Government - the Professions
Government - Business - Labor
Philanthropy - Religion - Art
Journalism - the Media
Sports and Entertainment
Communities - Leadership

#### Smart Cities: New York

eEducation for the New Millennium

## Education – by, for, and through the City.

The edZone transforms the conditions of teaching and learning by making high-quality educational tools and resources ubiquitous and continuous program, as that program comes to contain the school, the home, the throughout the City. The school ceases to contain the educational community, the entire City.

city life participate in the work of education and become accountable for components of the City become more visible and explicit. All sectors of With this change, the educational responsibilities of the diverse the quality of their contributions.

schools should do or stop doing. The question becomes more practical community group, work through the edZone to help the progeny of the and participatory - how can business, or the press, or one or another business, or the press, or one or another community group, think the The question ceases to be the old, rather divisive issue - what does City develop its fullest potentials? It will take much experimentation and effort to find all the ways different groups can answer this question with effect.

Introduction (2-6)

72

edZone Strategies (7-36) Engagement (8-19) Intelligence (20-27) Communication (28-36)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

The City as Educator

Smart Cities: New York eEducation for the New Millennium The City as Educator

## **Greater New York**

Get in the Zone

Introduction (2-6)

73

edZone Strategies (7-36) Engagement (8-19) Intelligence (20-21) Communication (28-36)

edZone Practice (37-64) Goals (37-39) Learning Standards (40-58) Using the edZone (59-64)

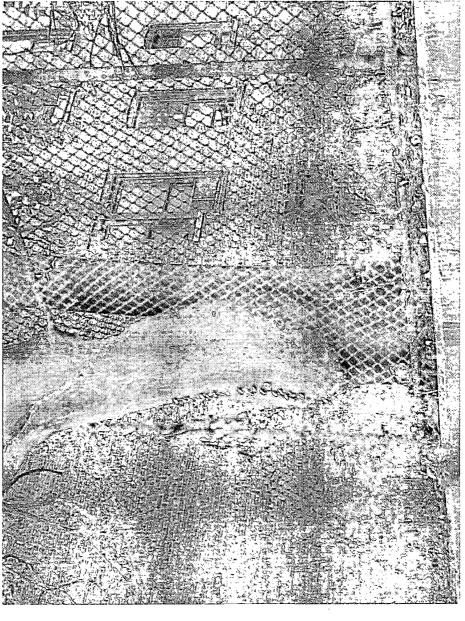
Building the edZone (65-74) Pedagogical Requirements (65-70) Civic Commitments (71-72)

Conclusion (72-74)

#### Smart Cities: New York

eEducation for the New Millennium

Where there is a will



Introduction (2-6)

74

Engagement (8-19) Intelligence (20-27) Communication (28-36)

edZone Practice (37-64)

Building the edZone (65-74)

Conclusion (72-74)





U.S. Department of Education

Office of Educational Research and Improvement (OERI)

National Library of Education (NLE)

Educational Resources Information Center (ERIC)



UD 035 342

#### REPRODUCTION RELEASE

(Specific Document)				
I. DOCUMENT IDENTIFICATION	•			
Title:				
Smart Cities: New York	. Electronic Education for	the New Millennium		
Author(s): ROBERT Me C	LINTOCK			
Corporate Source:	Publication Date:			
Institute for Learning Te Columbia University	ge, August 2000			
II. REPRODUCTION RELEASE:				
monthly abstract journal of the ERIC system, Res and electronic media, and sold through the ERIC reproduction release is granted, one of the following	timely and significant materials of interest to the educ- cources in Education (RIE), are usually made available C Document Reproduction Service (EDRS). Credit is ng notices is affixed to the document.	le to users in microfiche, reproduced paper copy is given to the source of each document, and,		
The sample sticker shown below will be affixed to all Level 1 documents	The sample sticker shown below will be affixed to all Level 2A documents	The sample sticker shown below will be affixed to all Level 2B documents		
PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY		
	sample	sample		
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)	TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)	TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)		
1	2A	2B		
Level 1	Level 2A	Level 2B		
Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.	Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only	Check here for Level 2B release, permitting reproduction and dissemination in microfiche only		
	nts will be processed as indicated provided reproduction quality per produce is granted, but no box is checked, documents will be proce			
I hereby grant to the Educational Resol	rces Information Center (ERIC) nonexclusive permiss	sion to reproduce and disseminate this document		

	hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this docume as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its syste contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service egenci to satisfy information needs of educators in response to discrete inquiries.		
Sign \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Stepheture: 655 Vellah	Printed Name/Position/Title: Robert McClintock	
nlease	Organization/Address:	Telephone: 698 3395 512 678 8 729	
RIC	Teachers College, Columbia U	E-Mail Address:	
ext Provided by ERIC		(over)	

#### III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Address:	
Price:	
	· · · · · · · · · · · · · · · · · · ·
IV. REFERRAL OF ERIC TO COPYF	RIGHT/REPRODUCTION RIGHTS HOLDER:
If the right to grant this reproduction release is held by address:	someone other than the addressee, please provide the appropriate name and
Name:	
Address:	
	•
	·
·-	
V. WHERE TO SEND THIS FORM:	ERIC Clearinghouse on Urban Education Box 40, Teachers College Columbia University
Send this form to the following ERIC Clearinghouse:	525 W. 120 <sup>th</sup> Street, Main Hall 303 New York, NY 10027
	Tel: 212-678-3433 / 800-601-4868 Fax: 212-678-4012
	http://eric-web.tc.columbia.edu

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility

4483-A Forbes Boulevard Lanham, Maryland 20706

Telephone: 301-552-4200 Toll Free: 800-799-3742

FAX: 301-552-4700

e-mail: info@ericfac.piccard.csc.com WWW: http://ericfacility.org

EFF-088 (Rev. 2/2000)

Publisher/Distributor:

